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PHARMACYCLICS ANNOUNCES PROMISING RESULTS FROM PHASE 2 CLINICAL TRIAL OF XCYTRIN® IN RECURRENT, METASTATIC NON-SMALL CELL LUNG CANCER

-- Data Support Rationale for Comprehensive Ongoing Phase 2 Program as Combination Agent with Standard Chemotherapies and Pivotal Lung Cancer Trial Scheduled to Begin Early Next Year --

CHICAGO, Ill. and SUNNYVALE, Calif. -- June 1, 2007 -- Pharmacyclics, Inc. (Nasdaq: PCYC) today announced promising preliminary results from an open-label Phase 2 clinical trial of Xcytrin® (motexafin gadolinium) Injection, the company's lead cancer therapeutic candidate, as a second-line treatment for patients with recurrent, metastatic non-small cell lung cancer (NSCLC) who failed at least one platinum-based chemotherapy regimen. The results were published in the proceedings of the 2007 American Society of Clinical Oncology Annual Meeting (ASCO) taking place this week in Chicago.

"These results indicate that Xcytrin is an active, well-tolerated drug for treatment of recurrent NSCLC," said Richard A. Miller, M.D., president and CEO of Pharmacyclics. "The response rate and survival observed in this trial are comparable to currently approved second-line therapies for NSCLC and support our strategy to conduct multiple ongoing Phase 2 studies of Xcytrin in combination with standard therapies and move into a pivotal trial for this indication early next year. In addition, we are continuing to pursue our new drug application for Xcytrin to treat patients with brain metastases from NSCLC. We believe Xcytrin's selectivity, novel

mechanism of action, magnetic resonance imaging detectability, and non-overlapping toxicity with other agents make it an appealing drug to study in combination with other therapies for a broad range of cancers."

The abstract, “A phase II trial of motexafin gadolinium (MGd) in advanced non-small cell lung cancer (NSCLC) patients who had failed platinum-based chemotherapy: Preliminary results of Stage 1,” described interim results from a Phase 2 trial evaluating the safety, tumor response and duration of response in patients with recurrent NSCLC who are treated with Xcytrin. Patients in the trial are randomized to receive either a 10mg/kg dose of Xcytrin every week, or a 15mg/kg dose every three weeks. Tumor response rate is being evaluated using Response Evaluation Criteria in Solid Tumors (RECIST), the standard parameters used to document response for solid tumors.

Of 58 evaluable patients there was a confirmed response rate of 5.2%, or three partial responses. Twenty patients (34.5%) had stable disease. One of the responders received Xcytrin after having progressed through two prior lines of therapy: carboplatin, gemcitabine and bevacizumab, followed by erlotinib. The other two had previously failed either carboplatin/gemcitabine or cisplatin/vinorelbine. Median time to progression was seven weeks for all patients. Twenty (34.5%) patients received four or more cycles of Xcytrin, of whom seven did not respond to first line chemotherapy. Thirteen percent were free from progression at six months. Median survival was eight months, with 62% and 30% of patients alive at 6 and 12 months, respectively. Xcytrin was well-tolerated in this study. The most common grade 3 or 4 adverse events were hypophosphatemia (24%), dyspnea (12%), fatigue (10%), hypoxia (7%), and finger blisters (5%).

About Non-Small Cell Lung Cancer

The American Cancer Society predicts that there will be more than 213,000 new cases of lung cancer in the U.S. in 2007. Lung cancer is the leading cause of cancer death, and accounts for over 160,000 deaths in the U.S. each year. The most common form of lung cancer, non-small

cell, is incurable in advanced stages. Lung cancer frequently spreads to other body parts, including the brain.

Xcytrin in Second-Line Lung Cancer

Pharmacyclics is developing Xcytrin as an anti-cancer agent with a novel mechanism of action that is designed to selectively concentrate in tumors and induce apoptosis (programmed cell death). Xcytrin is a redox-active drug that has been shown to disrupt redox-dependent pathways in cells and inhibit oxidative stress related proteins such as thioredoxin reductase. Its multifunctional mode of action, including its magnetic resonance imaging detectability, provides the opportunity for Xcytrin to be used in a broad range of cancers. In previously conducted randomized trials, Xcytrin combined with whole brain radiation therapy (WBRT) has been shown to prolong time to neurologic progression in patients with brain metastases from NSCLC.

The target for Xcytrin is the enzyme thioredoxin reductase, which is frequently over expressed in lung cancer cells. This enzyme has been shown to confer to cancer cells characteristics of aggressive tumor growth and resistance to chemotherapy. First line therapy for advanced NSCLC includes combination chemotherapy using drugs such as carboplatin, cisplatin, Gemzar® (gemcitabine), taxanes and others. Currently approved agents for second-line treatment of NSCLC include Alimta® (pemetrexed), Tarceva® (erlotinib) and Taxotere® (docetaxel), which have tumor response rates ranging from 4-10%.

Xcytrin, either in combination with Alimta or Taxotere, is now being evaluated in two other ongoing Phase 2 trials as second-line therapy for NSCLC. Interim data from these trials will be presented in late June at the International Lung Cancer Congress Meeting.

About Pharmacyclics

Pharmacyclics is a pharmaceutical company developing innovative products to treat cancer and other serious diseases. The company is leveraging its small-molecule drug development expertise to build a pipeline in oncology and other diseases based on a wide range of targets, pathways and

mechanisms. Its lead product, Xcytrin, has completed Phase 3 clinical trials and several ongoing Phase 1 and Phase 2 clinical trials are evaluating Xcytrin, either as a single agent or in combination with chemotherapy and/or radiation in multiple cancer types. A New Drug Application for use of Xcytrin in combination with WBRT for treatment of brain metastases from NSCLC was filed with the Food and Drug Administration in April 2007. More information about the company, its technology, and products can be found at www.pharmacyclics.com. In addition, more information about advocacy on behalf of Xcytrin can be found at www.yourcanceryourchoice.com. Pharmacyclics®, Xcytrin® and the "pentadentate" logo® are registered trademarks of Pharmacyclics, Inc.

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NOTE: Other than statements of historical fact, the statements made in this press release about plans for our NDA filing, enrollment and future plans for our clinical trials, progress of and reports of results from preclinical and clinical studies, clinical development plans and product development activities are forward-looking statements, as defined in the Private Securities Litigation Reform Act of 1995. The words "believe," "will," "may," "continue," "plan," "expect," "intend," "anticipate," variations of such words, and similar expressions also identify forward-looking statements, but their absence does not mean that the statement is not forward-looking. The forward-looking statements are not guarantees of future performance and are subject to risks and uncertainties that may cause actual results to differ materially from those in the forward-looking statements. Factors that could affect actual results include risks associated with the fact that data from preclinical studies and Phase 1 or Phase 2 clinical trials may not necessarily be indicative of future clinical trial results; our ability to obtain future financing and fund the product development of our pipeline; the possibility that the FDA refuses to approve our NDA; because our Phase 3 clinical trial known as the SMART (Study of Neurologic Progression with Motexafin Gadolinium And Radiation Therapy) trial failed to meet its primary endpoint, the FDA may require additional data, analysis or studies before the NDA is approved by the FDA; the outcome of any discussions with the FDA; the initiation, timing, design, enrollment and cost of clinical trials; unexpected delays in clinical trials and preparation of materials for submission to the FDA as part of our NDA filing; our ability to establish successful partnerships and collaborations with third parties; the regulatory approval process in the United States and other countries; and our future capital requirements. For further information about these risks and other factors that may affect the actual results achieved by Pharmacyclics, please see the company's

reports as filed with the U.S. Securities and Exchange Commission from time to time, including but not limited to its annual report on Form 10-K for the period ended June 30, 2006 and its subsequently filed quarterly reports on Form 10-Q. Forward-looking statements contained in this announcement are made as of this date, and we undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise.

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